

Wastewater Treatment Division

Department of Natural Resources and Parks King Street Center 201 South Jackson Street Seattle, WA 98104-3855

April 2, 2004

TO:

Recipients of Brightwater Final EIS

FROM:

Shirley Marroquin, Supervisor Study Marroquin

Environmental Planning and Communatty Relations

RE:

Addendum No. 2 to Brightwater Final EIS

The King County Wastewater Treatment Division is issuing a second addendum to the Final Environmental Impact Statement (EIS) for the Brightwater Regional Wastewater Treatment System (issued November 2003). Please note that consistent with the State Environmental Policy Act (WAC 197-11-625), King County is sending this addendum to recipients of the Final EIS. However, King County did not circulate a draft addendum, and there is no comment period for the addendum.

The addendum has been prepared in compliance with the State Environmental Policy Act (SEPA) (RCW 43.21C), the SEPA Rules (WAC 197-11), and Chapter 20.44 King County Code, implementing SEPA in King County procedures.

Addendum No. 2 provides additional information about the Brightwater proposal and modifications to the proposal. The modifications and the impacts of these modifications are within the range of alternatives and significant adverse environmental impacts previously analyzed in the Brightwater EIS, and this addendum does not substantially change that analysis (see WAC 197-11-600). Addendum No. 2 does the following:

- > Identifies selected portal sites.
- Provides information and analysis of the impacts of using trucks, barge, or rail for transporting excavated materials away from the Portal 19 site at the ChevronTexaco Richmond Beach Asphalt Terminal.

- ➤ Describes and analyzes the impacts of a proposed temporary construction access road at the southern end of the Route 9 site and installation of a traffic signal at the SR-9/SR-522 Westbound ramp intersection to reduce construction-related traffic along SR-9 north of SR-522.
- ➤ Provides more information and analysis of impacts of demolition and construction on the Route 9 site, particularly in relation to the StockPot Culinary Campus.

As other addenda are prepared, you will receive copies. If you have questions, please contact the Brightwater Project Team at (206) 684-6799, toll-free 1-888-707-8571, or 711 TTY.



Final Environmental Impact Statement for the

Brightwater Regional Wastewater Treatment System

Addendum 2

April 2004

This information is available in alternative formats upon request by calling 206-684-1280 (voice) or Relay Service 711 (TTY).



Department of Natural Resources and Parks

Wastewater Treatment Division King Street Center, KSC-NR-0503 201 South Jackson Street Seattle, WA 98104

Summary

On November 19, 2003, King County issued a Final Environmental Impact Statement (Final EIS) analyzing the probable significant adverse environmental impacts of alternative combinations and configurations of facilities that would constitute the proposed Brightwater Regional Wastewater Treatment System. King County and other jurisdictions will take actions on the proposal in coming months after considering the information and analysis in the Brightwater EIS.

Purpose of Addendum

Under the State Environmental Policy Act (SEPA), issuance of an Addendum is appropriate to provide additional information or analysis that does not substantially change the analysis of significant impacts and alternatives in an existing environmental document (WAC 197-11-600[4][c], -706). Since issuance of the Final EIS, additional information has become available for some topics. This information may assist regulatory agencies, provide useful information to other agencies and the public, and does not substantially change the analysis of significant impacts and alternatives in the Final EIS.

On December 1, 2003, King County Executive Ron Sims identified the locations of proposed Brightwater facilities and authorized King County staff to proceed to work with host jurisdictions and regulatory agencies to secure permits and commence construction and operation of Brightwater facilities. The planning and analysis associated with the predesign of proposed Brightwater facilities has continued, following issuance of the Final EIS, as part of the ongoing project implementation and permit application processes. Included as part of that overall pre-design and permit application work are areas of environmental analysis that add information to the Final EIS and are appropriately included in an EIS Addendum.

Addendum 1 to the Brightwater Final EIS was published on January 27, 2004. It provided an updated analysis of traffic impacts and mitigation measures, and additional information about potential use of the existing ChevronTexaco Richmond Beach Asphalt Terminal barge dock (ChevronTexaco barge dock) during construction.

This document, Addendum 2 to the Brightwater Final EIS, provides additional information for the following topics:

- Selected Portal Sites
- Options for Transporting Materials to and from Portal 19
- New Construction Access Road at the Route 9 Site
- Demolition/Construction at the Route 9 Site

Each of the above topics is covered in a separate chapter of this Addendum. Each chapter presents updated information about the project description that is relevant to the topic being discussed. The chapter then discusses potential impacts and mitigation related to that topic and summarizes changes to information presented in the Final EIS.

Additional addenda will be issued as the Brightwater design and permit application process moves forward and as additional information on topics covered in the Brightwater EIS becomes available, provided that information does not substantially change the analysis of significant impacts and alternatives in the EIS.

Final EIS Clarifications

Upon review of the Brightwater Final EIS, the City of Woodinville identified some statements that in its view warrant clarification. The Final EIS noted in Chapter 11 on page 11-13 that the Route 9 site is not within the area proposed for annexation by the City. This is a correct statement regarding the area currently proposed for annexation by the City. Because nearly all of the Route 9 area remains within the City's designated Urban Growth Area, however, it could at some future date be proposed for annexation.

A second area of clarification relates to the statement in the Final EIS about the ownership of wells in the City of Woodinville. The Final EIS states in Chapter 6 on page 6-21 that the City of Woodinville installed and maintains two water supply wells. The wells in question are located in the City of Woodinville, but they are owned by Woodinville Water District and not the City. This clarification was not included in the Final EIS.

Document Incorporated by Reference

The following document is incorporated by reference: *Biological Assessment Supplement for the Brightwater Treatment System* (Jones and Stokes, April 2004). It supplements the *Biological Assessment for the Brightwater Treatment System* (Jones and Stokes, January 2004), incorporated by reference to Addendum 1 for the Brightwater Treatment System Final EIS.

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Chapter 1

Selected Portal Sites

Chapter 1 Selected Portal Sites

1.1 Project Description

Portals are the locations where workers would access the conveyance tunnel, remove soils excavated during tunnel construction, and store materials and equipment. The Final EIS included descriptions of several candidate portal sites located within each primary portal siting area. These portal siting areas were approximately 72-acre circles, within which several individual candidate portal sites were identified. The candidate portal sites are described in Chapter 3 of the Final EIS and illustrated in Figures 3-22 through 3-42 of that document.

As part of predesign efforts, individual portal sites have been identified within each of the portal siting areas for the selected Route 9–195th Street alternative. These individual sites were identified by applying Level 3 Screening Criteria as described in two documents: Appendix 2-C to the Final EIS, *Portal 19 Screening Level 3 Documentation, Final Technical Report* (HDR, August 2003), and *Level 3 Portal Screening Documentation for Portals 11, 44, 41, and 5* (HDR, November 2003). The *Level 3 Portal Screening Documentation* was released after the Final EIS, in support of Executive Sims' identification of the preferred alternative for the Brightwater System.

Portal sites have been selected within Portal Siting Areas 5 (Ballinger Way Portal), 11 (South Kenmore Portal), 19 (Point Wells Portal), 41 (North Creek Portal), and 44 (North Kenmore Portal). Figures 1-1 through 1-5 illustrate the locations of the selected portal sites.

Sites selected for Portals 11 and 41 are the same as their respective candidate sites illustrated in the Final EIS in Figures 3-26 and 3-40, respectively. Sites selected for Portals 5 and 19 are smaller than the candidate sites illustrated in the Final EIS in Figures 3-23 and 3-30, respectively, because the larger sites are not needed. However, the selected site illustrated in Figure 1-5 of this Addendum for Portal 44 is larger than the specific candidate site illustrated in the Final EIS in Figure 3-41, but well within the 72-acre portal site identified and evaluated in the Draft EIS.

Figure 1-5 shows a larger site for Portal 44 because King County may either purchase the entire 26-acre parcel since it is under one ownership or, alternatively, acquire only a smaller 7-acre portion of this parcel, as illustrated in Figure 3-41 of the Final EIS. Whether or not King County purchases the entire parcel, only 7 acres in the northwest corner would be needed for portal construction and operation. Of the 7 acres, permanent facilities would occupy 1.5 acres, and construction would require an additional 5.5 acres

for approximately 4 years. After construction is complete, the 5.5 acres would be restored and would include 1.5 acres of wetland buffer enhancement. The wooded area on the eastern half and southwest corner of the parcel would not be affected. If King County purchases the entire parcel, the area not needed for portal construction and operation could remain undeveloped and may provide future open-space options for the City of Kenmore.

Areas shown on the portal maps are estimated areas needed to support construction of the conveyance system. Actual areas purchased may be smaller, and property may be obtained through temporary or permanent easements or a combination of these options.

1.2 Areas of Potential Impact and Proposed Mitigation

Environmental impacts resulting from constructing and/or operating the selected portals are described in detail in the Final EIS. Associated mitigation measures are also identified in the Final EIS. Any new or additional site-specific information obtained about these portals during the predesign process is described where appropriate in the following chapters of this Addendum.

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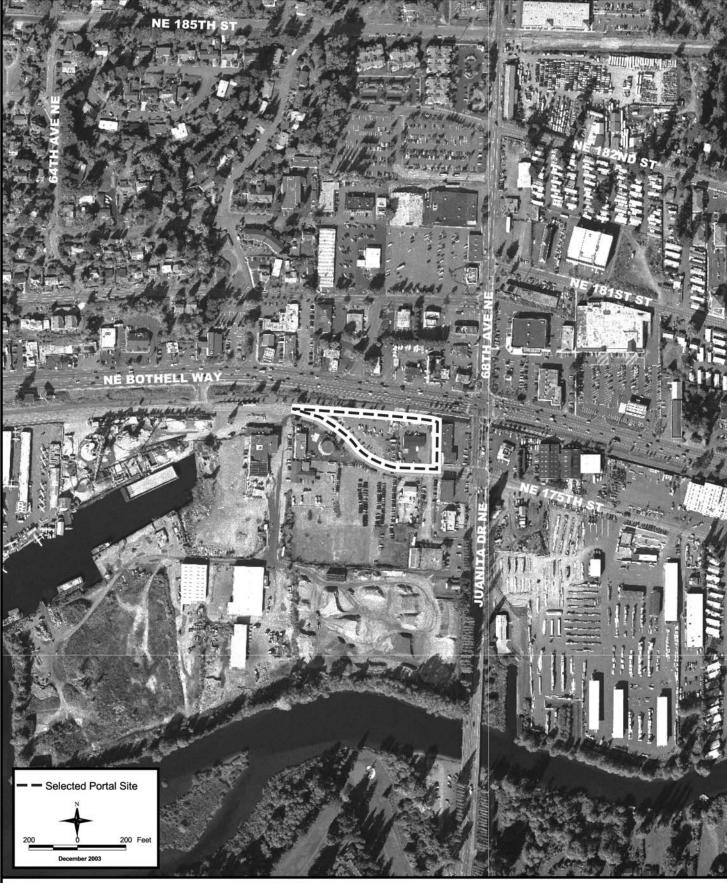




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Figure 1-1
Ballinger Way Portal (5) Selected Site
BRIGHTWATER REGIONAL
WASTEWATER TREATMENT SYSTEM





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Figure 1-2 South Kenmore Portal (11) Selected Site BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM





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Figure 1-3
Point Wells Portal (19) Selected Site

BRIGHTWATER REGIONAL
WASTEWATER TREATMENT SYSTEM





Figure 1-4 North Creek Portal (41) Selected Site BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM





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Figure 1-5 North Kenmore Portal (44) Selected Site BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM

Chapter 2

Options For Transporting Materials To And From Portal 19

Chapter 2 Options for Transporting Materials to and from Portal 19

This chapter expands on the discussion of potential impacts associated with mitigation options for transporting materials to and from Portal 19 during construction. These options include trucks using Richmond Beach Drive NW, barges using the existing ChevronTexaco barge dock, and railroad cars using a constructed railroad spur on the Burlington Northern-Sante Fe Railroad. The discussion draws on additional information developed as part of ongoing preliminary design investigations. The overall impacts and conclusions analyzed in the Final EIS have not changed. Key issues relate to:

- Potential impacts to benthic habitat, eelgrass, and water quality during placement of additional support pilings at the ChevronTexaco barge dock
- Risk of spilling materials into the water around the dock during conveyance to the barge
- Potential disturbance of bald eagles by noise and activity associated with construction at the Portal 19 site, including pile driving activities
- Noise and lighting associated with construction at the Portal 19 site
- Permitting associated with construction activities within 200 feet of the shoreline
- Effects on local traffic resulting from using barges or railroad cars instead of trucks to transport excavated materials, and from using trucks to deliver materials to the Portal 19 site
- Potential impacts to marine traffic and railways from the barge and rail options

2.1 Project Description

During construction of Portal 19 and the outfall at Point Wells, most construction materials and equipment would likely need to be brought to the site using trucks. However, the Tunnel Boring Machine (TBM) could be brought to the site via barge, and excavated materials could be transported away from the site using trucks, barge, or rail. These three options for transporting excavated materials are considered below. A full discussion of proposed construction activities at Portal 19 is provided in Chapter 3 of the Final EIS.

Portal 19 is located adjacent to Puget Sound, approximately 150 feet west of Richmond Beach Drive NW, on the southern portion of the ChevronTexaco barge dock. Portal 19 would serve as a working portal to support the construction of approximately 21,000 feet of effluent tunnel extending eastward toward Portal 5, which would be located near NE 205th Street and Ballinger Way NE. Portal 19 would also serve as a connection point to the outfall (Figure 2-1).

Construction activities at the Portal 19 site would include site preparation; portal excavation and construction; assembly and launch of the TBM; and support of the TBM during tunnel excavation, which includes lighting, ventilation, removal of excavated material (muck), storage of pipeline segments, and equipment maintenance. Overall construction at Portal 19 is anticipated to last between 3 and 4 years. Construction would include mobilization, site preparation and grading, portal shaft excavation, tunnel excavation, tunnel lining, facility structures construction, roadwork, landscaping, and final site cleanup. Within the total construction duration, approximately 2 years would be needed for tunnel and portal shaft excavation.

Activities at Portal 19 for construction of the outfall may include stockpiling of excavated materials, assembly of pipeline segments, loading and unloading of trucks carrying materials, and storage of construction materials and machinery.

Three options are available for transporting excavated materials away from Portal 19 and for transporting the TBM to the site:

- Option 1 Trucks using Richmond Beach Drive NW
- Option 2 Barges using the existing ChevronTexaco barge dock
- Option 3 Railroad cars using a constructed railroad spur

In addition to hauling away excavated soil, construction would require supply of materials, equipment, concrete, asphalt, gravel, and tunnel liner segments to the Portal 19 site. While three options are available for transporting excavated materials away from the site, other construction materials would need to be transported to the site using trucks. Approximately 5,000 truck trips over the 28 months of tunnel construction would be needed for materials delivery in addition to trucks used for disposal of excavated materials under Option 1. The truck trips needed to deliver materials would be the same if excavated materials were removed using barge or rail under Option 2 or Option 3. The TBM may be transported to the site using any of the three options described above.

2.1.1 Option 1 – Truck Transportation

Excavated materials and possibly other construction-related materials could be hauled from the site using double truck and trailer combinations (Option 1). This option was evaluated in the Final EIS. Refer to Chapter 16 of the Final EIS for analysis of transportation impacts of Option 1. The truck transportation option would require that

trucks travel approximately 3.7 miles through the City of Shoreline, including the Richmond Beach neighborhood, to reach the I-5 freeway. A new access road would be constructed on the site to connect to the existing concrete overhead trestle that allows truck traffic to access the site from Richmond Beach Drive NW.

2.1.2 Option 2 – Barge Transportation

Excavated materials and other construction-related materials that could reasonably be hauled by this means could be transported offsite using barges (Option 2). The barges would be loaded at the existing ChevronTexaco barge dock. Improvements to the barge dock would be needed before the dock could be used for TBM delivery; improvements may also be required if the dock is used for hauling soils offsite. The option of using the existing ChevronTexaco barge dock as a possible mitigation measure was discussed in Section 16.3.2.2 of the Final EIS; impacts associated with barge use during outfall construction were discussed in Section 16.3.1.5. Impacts to plants and animals are discussed in *the Biological Assessment* (Jones and Stokes, January 2004, incorporated by reference to the Brightwater Regional Wastewater Treatment System Final EIS, Addendum 1). Improvements to the existing ChevronTexaco barge dock would include placement of up to 30 steel pilings at the barge dock to provide adequate structural support for the weight of the TBM and other equipment. If materials are barged offsite rather than trucked, it would require double handling of soils since materials would have to be transferred at the receiving end from the barge to trucks for final disposal.

Although less truck traffic would result within the City of Shoreline from this option than Option 1, trucks would be needed to deliver concrete and other materials to the site (approximately 5,000 trucks total over 28 months). While it may be feasible to deliver some materials to the site via barge, other materials may arrive from the east, making delivery by barge impractical. In addition, excavated materials would be stockpiled at the site for a longer period of time than would occur for Option 1, because the barges would come to the site less frequently than trucks. Trucks would be used as a backup for transporting excavated materials when the barge is not available or is delayed. Operation of this option would require trained personnel, appropriate planning and operation, and monitoring and spill prevention. The state and local permitting required to allow this mitigation measure to be implemented would be extensive and the outcome is uncertain.

2.1.3 Option 3 – Railroad Transportation

Another option for transporting excavated materials offsite (and other construction-related materials that are reasonable to be transported by this means) is to use railroad cars (Option 3). ChevronTexaco currently uses the existing railroad lead off the Burlington Northern-Santa Fe (BNSF) mainline at the ChevronTexaco Asphalt Terminal. Railcars are used to transport asphalt and marine fuel at least twice per week, generally about nine cars each time. The existing railroad lead may be used with appropriate

coordination with ChevronTexaco's operations and permission from BNSF. A new spur off of the lead would need to be constructed to support loading activities at the site.

Although less truck traffic would result from this option than Option 1, trucks would be needed to deliver concrete and other materials to the site (approximately 5,000 trucks total over 28 months). Trucks would be used as a backup for transporting excavated materials when railcars are not available or the tracks are not in service.

Excavated material would be transferred to rail-mounted cars either from a slurry separation plant or from a stockpile using a conveyor system. A stockpile would be needed on the portal site to store excavated materials between railcar loadings. Operation of this option would require trained personnel, appropriate planning and operation, and monitoring and spill prevention. New facilities would likely need to be constructed including a switch (turn off), a spur track running the length of the site, and a signal/electric lock.

2.2 Areas of Potential Impact and Proposed Mitigation

Impact discussions that have been modified or refined from the Final EIS are included below. Only those topics with new information are discussed. Described below are impacts that may result from utilization of the ChevronTexaco barge dock at Point Wells (Option 2). Impacts to the Portal 19 site related to Option 1 were described in the Final EIS. Impacts resulting from implementation of Option 3, use of an existing railroad lead at the ChevronTexaco site, are very similar to those described for Option 1 for most elements of the environment, except for Transportation, which is described separately below.

2.2.1 **Earth**

Placement of up to 30 steel pilings at the ChevronTexaco barge dock (Option 2) would be accomplished with a hammer pile driver. Vibratory hammer installation would not achieve the necessary structural support for the TBM. While none of the existing piles would be removed, installation of the new piles would result in minor bottom disturbance during construction. The new pilings will be placed parallel to existing pilings using pile drivers, which result in less soil disruption than excavation techniques. These impacts are anticipated to be minor and of short duration, similar to, but less than, impacts associated with outfall construction described in Section 4.3.2.3 of the Final EIS. Chapter 3, Section 3.2.2.2 of the *Biological Assessment* includes a detailed description of proposed construction at the barge dock.

Sediment quality in the nearshore area has been shown to be consistent with Washington State Sediment Quality Standards, as described in Chapter 4 of the Final EIS. However, additional testing in the vicinity of the barge dock would be needed to confirm sediment quality in that area. Should any contaminated materials be identified that would be disrupted during construction, they will be handled in accordance with procedures outlined in Section 3.3.1.8 of the *Biological Assessment*. These procedures are in accordance with Washington State Department of Ecology (Ecology) requirements and applicable state and federal regulatory requirements.

Excavated earthwork at Portal 19 would include soils from the portal and soils from the tunnel and onshore portion of the outfall. The TBM would be launched at Portal 19 and would excavate approximately 21,000 feet toward Portal 5. Soil from the tunnel excavation between Portal 19 and Portal 5 would be conveyed through the tunnel to Portal 19 and would consist of either bentonite slurry or conditioned spoil depending on the type of TBM used. Excavated soils from the onshore portion of the outfall are expected to be sandy and unconsolidated. The earthwork volumes from portal construction, tunnel excavation, and onshore outfall construction are listed in Table 2-1, along with the approximate duration of excavation.

Table 2–1. Excavated Earthwork Volumes and Duration of Excavation at Portal 19

Activity	Earthwork Volume (cubic yards)	Approximate Excavation Duration (months)
Portal Construction	4,400	3
Tunnel Excavation	156,000	22
Onshore Outfall Construction ^a	4,500	3
Total Excavation Duration	164,900	28 ^b

^a Soils excavated from nearshore areas have not been quantified, but will be disposed of at a Puget Sound Dredge Disposal Area (PSDDA) location, as described in Section 3.3.3.4 of the *Biological Assessment* (Jones and Stokes, January 2004).

2.2.1.1 Proposed Mitigation

Mitigation measures described in Chapter 4 of the Final EIS would adequately reduce the earth impacts discussed above to the levels described in Chapter 4 of the Final EIS. Mitigation for pile placement and loading of the barges is discussed in the *Biological Assessment* in Section 3.3.2.2.

^b Excavation duration is a portion of the total construction duration. Total construction would be between 3 and 4 years.

2.2.2 Water

Impacts to water resources associated with Options 1 and 3 are similar and are described in Chapter 6 of the Final EIS. Additional discussion about impacts associated with Option 2 is provided below.

Piling placement at the barge dock using a pile driver may cause short-term local increases in turbidity. These impacts would be similar to those described for the outfall construction in Chapter 6 of the Final EIS.

If Option 2 is used to transport spoils, the excavated material from construction activities would either be trucked over the dock trestle and dumped into the barges, or a conveyor belt system would be installed to convey materials from the construction area to the barge. Conveying materials to the barge entails risk of spillage, which could temporarily impact water quality below the dock. Implementation of mitigation measures will minimize this risk, as discussed in Chapter 6 of the Final EIS and below.

2.2.2.1 Proposed Mitigation

Measures to minimize or avoid spills include completely enclosing over-water sections of the conveyor, installing a fixed downspout at the end of the conveyor to prevent wind from blowing spoils into the water during transfer, designing the conveyor to deposit spoils to the middle of the barge, and ensuring even loading of the barges, among other measures. These and other mitigation measures are described in Chapter 6 of the Final EIS and in Section 6.1.2.9 of the *Biological Assessment*. During construction, stormwater protection will include implementation of temporary erosion and sedimentation control measures in accordance with Ecology guidelines to minimize off-site transport of sediments. Implementation of these mitigation measures in compliance with all applicable regulatory requirements will reduce potential surface water impacts to levels described in Chapter 6 the Final EIS.

2.2.3 Plants and Animals

Impacts to plants and animals resulting from implementation of Option 2 are described below. Impacts resulting from implementation of Option 1 are described in Chapter 7 of the Final EIS. Impacts to plant and animal species resulting from Option 3 would be similar to those described for Option 1, and are not discussed specifically below. Additional discussion of impacts resulting from Option 2 is included in Chapter 6 of the *Biological Assessment*.

2.2.3.1 Fisheries

Installation of new piles at the ChevronTexaco barge dock is expected to temporarily affect 0.006 acre of nearshore habitat that is potentially used by chinook and coho salmon, bull trout, Pacific coast groundfish, and coastal pelagics. Because these species may occupy the area surrounding the barge dock, impacts to these species may result from construction activities. As described in Section 6.1.2.8 of the *Biological Assessment*, the concussive effects of hammer pile driving at the ChevronTexaco barge dock could harm salmonid fishes and other marine organisms adjacent to the construction site. To minimize this potential, existing guidance from the U.S. Army Corps of Engineers for driving of steel piles will be used. The existing guidance includes measures such as pile driving during low tide, using wood pads and bubble curtains to attenuate sound, and monitoring underground conditions. Pile driving will only be performed during in-water work windows, currently from July 15 to February 15. Specific conditions for construction will be determined during the permitting process with federal and state agencies.

Other impacts to fisheries associated with in-water construction along with proposed mitigation are described in Chapter 7 of the Final EIS.

2.2.3.2 Eelgrass

King County has not yet made any decision to include the barge dock as a mitigation measure for its proposal. Accordingly, the design of the barge dock improvements is not available at this time, but would be developed if and when King County decides to implement this option to mitigate surface transportation impacts. The exact location and number of piles has not been specifically determined, although estimates have been made. Analyses conducted as part of the *Biological Assessment* assumed a worst-case scenario that pilings would be placed in deep water along the main body of the dock (-40 to -50 feet MLLW) and along the trestle leading from the shore to the dock (-40 to +5 feet MLLW). More detailed discussions are included in Chapter 3 of that document. Although these areas were not included in the eelgrass survey conducted for this project, areas where piles would be installed along the main dock are at depths where eelgrass does not exist. It is assumed that eelgrass is present along the trestle and occurs at the same depth and density as eelgrass surveyed along the outfall alignment. Impacts to eelgrass associated with proposed nearshore construction methods are evaluated in Section 6.1.3.2 of the *Biological Assessment*. Proposed mitigation measures described in that document and Chapter 7 of the Final EIS would minimize impacts to eelgrass. The Biological Assessment Supplement, incorporated by reference to Addendum 2, includes an eelgrass mitigation and monitoring plan.

As described above, conveying materials to the barge entails risk of spillage, which could impact aquatic vegetation and benthos on the seafloor below the dock. The *Biological Assessment Supplement* includes a Tug and Barge Operation Plan, which would minimize potential for accidental spillage. As described in Section 6.1.3.2 of the *Biological*

Assessment, construction-related impacts to marine habitat would be temporary and are not expected to be significant; the permanent loss of habitat for the area occupied by the pilings is less than a 2-foot diameter for each piling and is not expected to significantly affect habitat.

2.2.3.3 Bald Eagles

Known bald eagle nests and breeding territories were researched and described in the *Biological Assessment* (Jones and Stokes, January 2004). The Portal 19 site is located within a breeding territory. Three nests are located within less than 0.5 mile of each other along Deer Creek ravine. The three nests are located within approximately one mile of the Portal 19 site. There is no direct line-of-sight between the nests and the portal site or the ChevronTexaco barge dock. As described in the *Biological Assessment* and in Chapter 7 and Appendix 7-A of the Final EIS, bald eagles may be disturbed by noise and activity associated with construction at the Portal 19 site. However, eagles in urbanized areas are habituated to human activity and are unlikely to display any behavioral response to construction activities. Impacts to eagles are expected to be minimal and of short duration. Impacts to bald eagles would be similar for each of the options considered, but because noise from pile driving is associated with Option 2 only, potential impacts could be slightly higher than for the other two options.

2.2.3.4 Proposed Mitigation

Measures to minimize or avoid spills while conveying materials to the barge include completely enclosing over-water sections of the conveyor, installing a fixed downspout at the end of the conveyor to prevent wind from blowing spoils into the water during transfer, designing the conveyor to deposit spoils to the middle of the barge, and ensuring even loading of the barges, among other measures. Following completion of the operations, underwater surveys would be performed to detect spillage and quantify any effects to benthic habitat and eelgrass cover. Any loss of habitat could be mitigated in the same manner as described in Chapter 7 of the Final EIS for the outfall, which would include transplanting eelgrass in impacted areas under a plan approved as part of several federal and state permits. If significant accumulations of spoils are found below the dock, King County would negotiate appropriate measures for removal or other mitigation. Compliance with these mitigation measures would reduce impacts to a level of non-significance.

Potential impacts to bald eagles would be minimized by not placing piles at night, not placing piles between January 15 and August 15 while an occupied nest is located within one mile of the site, and not placing piles between October 31 and March 31 when wintering bald eagles are likely to use the area. Work windows for bald eagles and fisheries will be coordinated with the appropriate resource agencies to ensure that bald eagles will be protected without compromising fisheries mitigation measures.

2.2.4 **Noise**

Noise impacts at Portal 19 were evaluated in Chapter 10 of the Final EIS. The following evaluation describes potential noise impacts associated with options being considered to mitigate surface transportation impacts. Noise impacts from surface construction activities would be the same for all three options considered. Noise impacts relating to improvements at the ChevronTexaco barge dock are discussed specifically below.

2.2.4.1 Current Noise Conditions

As part of the predesign effort, noise levels were measured for a continuous 24-hour period at Portal 19 to determine existing noise levels. Land use in the vicinity is both commercial/industrial and residential. Puget Sound is located west of the site. Based on a field survey of the area, the nearest noise-sensitive receptors are homes across the street from Portal 19 to the east.

Noise levels at the site are dominated by traffic, operations at the ChevronTexaco facility, trains, and wind and wave noise from Puget Sound.

Noise levels are measured in decibels. Measuring levels are designed to respond to or ignore certain frequencies; the frequency weighting most commonly used is A-weighting, because it corresponds closely to human perception of loudness. Noise levels discussed below are reported in A-weighted decibels, or dBA. The type of sound measurement used as a basis for this discussion is the equivalent continuous sound level, abbreviated as Leq. It is defined as the level (in decibels) of a constant sound that has the same amount of sound energy as the actual fluctuating sound.

Monitoring data indicate that the maximum hourly Leq value at Portal 19 is 73 dBA, which occurred during the 11:00 a.m. hour on March 3, 2004. The minimum hourly Leq value is 46 dBA, which was measured during the 3:00 a.m. hour on March 3, 2004. The overall maximum noise level (Lmax) is 103 dBA, measured during the 11:00 a.m. hour on March 3, 2004. The overall minimum noise level measured at this site is 39 dBA, measured between the hours of 9:00 p.m. on March 2 and 12:00 a.m. on March 3, 2004.

2.2.4.2 Noise Impacts during Construction

Surface construction activities will generate comparable noise levels for all three options. Impacts from Options 1 and 3 are similar. Option 2 would result in additional noise generation associated with pile driving at the barge dock, as discussed below.

The Final EIS indicated the possible construction method that could be used at Portal 19 is interlocking sheet pile walls with a jet grout invert plug. The probable portal construction method has been modified to concrete slurry walls with a jet grout or concrete tremie invert slab, to address geotechnical considerations at the site.

For all three options, construction is anticipated to occur in five phases and take 3 to 4 years in total. These activities are predicted to occur largely during the daytime; however, some nighttime construction would occur. Nighttime activities at the portal would vary depending upon the phase of construction. Trucks moving soil, muck, and overburden would not be active at night. The tunnel-boring machine (TBM) may be in use, and if so, excavated muck and soils would be stockpiled. The noise analysis assumed that stockpiling would be the only outdoor activity occurring onsite at night between 10 p.m. and 7 a.m. If the TBM were not in use at night, TBM maintenance activities might occur.

Figure 2-2 shows noise contours associated with construction activities at Portal 19. Residences and other structures partially block sound traveling away from the portal site. This phenomenon, called building-induced shielding, reduces overall noise levels. It is important to note that noise contours are closer to the portal on the landward side of the project area. Noise travels more efficiently over open water, because open water is an acoustically reflective surface. Figure 2-2 also includes two text boxes that illustrate noise levels (at two different residences in the project area) with and without a noise wall around the construction site.

Modeling results indicate that construction noise impacts could occur at the adjacent residential land uses. The predicted noise level for nighttime construction activities at the nearest residential receptor is 65 dBA, which represents a 15 dBA exceedance over the Snohomish County Noise Ordinance of 50 dBA for nighttime noise levels at residential land uses. Implementation of noise mitigation measures would reduce this impact, as described below; however, exceedances of local noise ordinance requirements, if they occur, would require obtaining a variance from Snohomish County.

For Option 2, construction activities would include an upgrade of the Chevron Texaco barge dock which would require placement of up to 30 pilings next to existing dock pilings. It is assumed that the piles would be hammer driven over a period of weeks at the longest; construction estimates indicate that up to 5 pilings per day can be driven under optimal conditions. Hammer driven pile driving is considered an impulsive noise, which generates a higher level of annoyance than continuous, steady noise emissions (like traffic noise). Although the hourly noise levels are not predicted to exceed the local daytime construction noise ordinances at the nearest sensitive receptors (residences), the impulsive nature of the noise may be perceived as annoying. Impacts to fish and wildlife from pile driving noise are discussed in Section 2.2.3 of this chapter.

Pile driving activities create vibration levels that have the potential to exceed human perception levels and structural damage thresholds. Propagation of vibration energy is highly dependent on the local geology and will diminish at varying rates with increasing distance from the source. The nearest sensitive receptor to the pile driving activities is greater than 350 feet from the noise source. Based on general data collected for various pile driving activities, it is expected that the vibration levels may be perceptible at this distance, but will be below any building tolerance or structural damage thresholds.

2.2.4.3 Noise Impacts during Operation

A dechlorination facility could potentially be installed at Portal 19. Chapter 3 of the Final EIS indicated that this facility would be located at Portal 5, however, refinements during predesign have resulted in placement of this facility, if it is needed, at Portal 19. If a dechlorination facility is constructed at Portal 19, it would include sound-attenuation materials to ensure compliance with the local noise ordinances and would be designed not to exceed the noise ordinance at the property lines. A detailed acoustical analysis of this facility would be performed during the final design phase. By design, operation of a dechlorination facility would not contribute to noise impacts.

2.2.4.4 Proposed Mitigation

Three categories of noise mitigation options exist: source treatments, path treatments, and receiver treatments. Examples of source treatments include limiting the hours of operation at the construction site (which may not be feasible to meet overall schedule goals) and ensuring that proper mufflers are installed on loud equipment. Examples of path treatments include noise walls, earthen berms, and use of vegetated buffer zones to reduce noise levels at the receptor. Receiver treatments include measures to ensure that residential construction materials provide adequate acoustical transmission loss to reduce indoor noise to acceptable levels.

This analysis focuses on path treatments. Installation of a temporary 20-foot noise wall would reduce noise impacts at adjacent residences. The analysis modeled a temporary 20-foot-tall noise wall, whose base is located at the adjacent roadway elevation. The actual elevation of the construction site is lower than the roadway. This difference in elevation maximizes noise wall effectiveness. Noise walls provide noise reduction benefits to residences closest to the walls. Residences farther away would receive less benefit. It is difficult to quantify noise levels farther away from the wall. Mobile sources of construction noise will likely move around the construction site, throughout the normal course of daily events. As they do so, the effectiveness of the noise wall will change. Specifically, when noise sources are close to the noise wall, the noise reduction performance of the wall will be at its greatest (due to the sharp angle of incidence of sound waves reaching the top of the wall). As mobile construction noise sources move farther away from the wall, the effectiveness of the noise wall will decrease (because of the lower angle of incidence at which sound waves reach the top of the wall).

It may be more effective to place a noise wall closer to the nearby residences, perhaps even on their property. While this would maximize noise wall effectiveness, it will likely degrade the residents' views and may therefore be undesirable. If the temporary noise wall located on the western edge of the adjacent roadway does not reduce construction noise to acceptable levels at the nearby residences, then King County would contact affected residents and discuss receiver-based treatment options. Maximum allowable outdoor construction noise levels are limited at the state, county, and local levels of government. While receiver-based treatment options may reduce the intrusiveness of

construction noise, these options will not affect outdoor noise levels. Therefore, upon implementation of receiver-based treatments, a compliance issue may still remain.

The mitigation approaches listed above will not be effective for the impulsive noise generated by the pile driving activities; however, the construction period for pile driving, limited to a period of weeks, is expected to be relatively short compared to other construction activities. To avoid this noise, pile driving activities would be limited to daytime hours. To minimize impacts to fish and wildlife, a wood block or other noise dampening device may be implemented in accordance with permitting requirements from state and/or federal agencies.

2.2.5 Land and Shoreline Use

As described in Chapter 11 of the Final EIS, construction activities within 200 feet of the shoreline would require a shoreline substantial development permit. Structural improvements to the barge dock would need to be included as part of the shoreline substantial development permit. Repairs to the existing barge dock must be consistent with shoreline regulations. Additional state and federal approvals required for construction of the barge dock are outlined in the *Biological Assessment*.

2.2.5.1 Proposed Mitigation

Mitigation measures included in the Final EIS and compliance with shoreline substantial development permitting requirements would adequately reduce all land and shoreline impacts to levels described in the Final EIS.

2.2.6 Light and Glare

As described in Chapter 13 of the Final EIS, lighting currently exists at the barge dock at the ChevronTexaco barge dock. Lighting would continue to be needed to provide for security and to illuminate construction activities. The lighting levels associated with all three transportation options are anticipated to be similar to current conditions at the site. Tunneling operations would be conducted on a 24-hour basis, and lights would be needed for tunneling operations at night.

2.2.6.1 Proposed Mitigation

Mitigation measures described in the Final EIS would adequately reduce the light and glare impacts to a level of non-significance.

2.2.7 Transportation

The potential traffic impacts and benefits resulting from the use of a barge (Option 2) or railroad (Option 3) to remove the excavated spoils from the construction of Portal 19 and Zone 7S outfall are evaluated in this section. Option 1 is evaluated in Chapter 16 of the Final EIS. In addition, the construction trip estimates and traffic analysis prepared for the Final EIS have been refined as part of ongoing preliminary design efforts and revised tunnel alignments. Assumptions related to construction scheduling and processes reflect the refined design of the treatment plant, portals, and conveyance system. The estimated peak construction traffic activities for Portal 19 and the Zone 7S outfall, assuming truck transport of earthwork spoils, are shown in Table 2-2. The refined construction estimate (Option 1) reflects slight differences in comparison to estimates presented in the Final EIS. For Option 1 during the peak construction period, total daily construction trips are estimated to increase by 8 and peak hour trips are estimated to decrease by a single trip in the refined estimate (Option 1). The barge or railroad option (Option 2 or 3) would decrease traffic to and from the site by approximately 92 daily or 12 peak hour truck trips during the peak construction period, in comparison to the refined Option 1.

Table 2–2. Portal 19 and Zone 7S Outfall Estimated Peak Project Construction Trips

	Final EIS Estimate ^a			otion 1 d Estimate ^b	Options 2 & 3 Barge/Rail Option	
Type of Trips	Daily Trips	PM Peak Hour Trips	Daily Trips	PM Peak Hour Trips	Daily Trips	PM Peak Hour Trips
Earthwork Truck Trips	78	10	92	12		
Concrete Truck Trips	10	1	10	1	10	1
Construction Worker Trips	110	55	104	52	104	52
Misc. Vehicle/Materials Delivery	24	2	24	2	24	2
Total Trips	222	68	230	67	138	55

^a Source: URS, August 19, 2003

2.2.7.1 Truck Trips on Surface Roadways

Either barge (Option 2) or railroad cars (Option 3) may be utilized to remove earthwork spoils from the Portal 19 and Zone 7S site. Impacts to truck traffic on surface roadways from either of these options would be the same. If implemented, the truck trips on the surface transportation system serving Portal 19 would be reduced. A corresponding number of truck trips would be needed at the rail or barge trans-shipment point, which would be zoned appropriately for such activities. Trucks would still be needed to deliver concrete and other materials to the Portal 19 site (approximately 5,000 truck trips over 28 months). Using either the barge or railroad option would decrease traffic to and from the site by approximately 92 daily or 12 peak hour truck trips compared to the refined

^b Source: HDR/URS, February 14, 2004

estimate during the peak construction period, as shown in Table 2-2. The reduced number of trips would be experienced on all the roadways along the proposed construction route, beginning from I-5 to SR-104, south on SR-99 to N 185th Street, and continuing west to NW Richmond Beach Road, NW 195th Street, and NW 196th Street to Richmond Beach Drive NW.

In the Final EIS, the morning peak hour was analyzed only for specific locations where the morning volumes were considerable, to address worst-case conditions. In the Portal 19 vicinity, both morning and afternoon peak period intersection turning movements were collected in 2003 to evaluate the existing traffic conditions in the portal study area. The data showed the peak hours starting between 7:30 and 8:00 a.m. and 4:00 and 4:45 p.m., respectively.

If either the barge (Option 2) or railroad option (Option 3) were used to remove excavated materials, there would be minimal impact on the intersection level of service (LOS) operations during peak traffic hours (Table 2-3). The LOS would remain the same as the No Action Alternative described in the Final EIS regardless of whether trucks, barges, or railcars were used to remove excavated materials. For Option 1, the total refined estimate results in a decrease of one afternoon peak hour trip from the Final EIS estimate, but because the earthwork trucks increase by two at the intersections' critical movements, the peak hour delay increases by up to eight seconds per vehicle over the No Action condition. However, both the barge and railroad options would decrease delays by up to two seconds per vehicle when compared with Option 1, as shown in Table 2-2. The North 185th Street and SR-99 intersection delays would be mitigated back to the No Action condition by adjustment of traffic signal timing, which is the same mitigation proposed in Chapter 16 of the Final EIS.

The barge and railroad options would not change the traffic impacts and proposed mitigation measures that were described in the Final EIS. However, additional benefits would result from either the barge or railroad option:

- The roadways within the City of Shoreline that would be used for hauling related to Portal 19 construction currently have fair to good pavement conditions. The decreased truck traffic associated with the barge or railroad traffic would reduce impacts to the roadway surfaces within the City of Shoreline.
- The conflicts between pedestrian/bicycle traffic and construction vehicles along SR-99, NW 196th Street, and Richmond Beach Drive NW would be slightly reduced with the barge and railroad options by reducing the number of truck trips on these roadways.

Table 2–3. Portal 19 – Estimated 2007 Intersection Peak-Hour Traffic During Construction

	No /	Action	Fin	al EIS		o <u>tion 1</u> d Estimate	Portal Barge/	n 2 & 3 19 with Railroad tion
Intersection	LOS	Delay ^a	LOS	Delay ^a	LOS	Delay ^a	LOS	Delay ^a
AM Peak Hour								
N 185th Street and SR – 99	E	64	Е	76	E	72	E	70
NW Richmond Beach Road and 8th Avenue NW	С	32	С	34	С	33	С	33
NW 196th Street and Richmond Beach Drive	Α	9	Α	9	Α	9	Α	9
PM Peak Hour								
N 185th Street and SR – 99	F	82	F	88	F	86	F	85
NW Richmond Beach Road and 8th Avenue NW	D	38	D	39	D	38	D	38
NW 196th Street and Richmond Beach Drive	Α	9	Α	10	Α	9	Α	9

Note: LOS analyses performed with HDR/URS, February 14, 2004 construction trip estimates prepared as part of predesign.

2.2.7.2 Marine Traffic and Railways

There would be potential impacts to the marine traffic and railways from the barge and rail mitigation options, respectively.

Activities currently occurring at the ChevronTexaco barge dock include approximately three to four barges per week and, on average, one tanker ship per quarter. Additionally, a lessee of the dock typically moors a 600-foot vessel once every one to two months. Tribal and recreational fishing and boating activities also occur near the site. Implementation of Option 2 would require coordination with all current dock users and with tribal and recreational fishing and boating activities.

ChevronTexaco currently uses the existing railroad lead off the BNSF mainline at the ChevronTexaco barge dock. Railcars are used to transport asphalt and marine fuel at least twice per week, generally about nine cars each time. The existing spur may be used with appropriate coordination with ChevronTexaco's operations.

Trucks would be used as a backup in case railcars or barge are not available or the tracks are not in service. Excavated material would be transferred to railcars or barge either from a slurry separation plant or from a stockpile using a conveyor system. A stockpile would be needed on the portal site to store excavated materials between railcar or barge loadings. Operation of either of these options would require trained personnel, appropriate planning, operation, and monitoring and spill prevention.

^aAverage delay, measured in seconds per vehicle, includes deceleration time, stopped time, and acceleration time due to intersection controls.

2.2.7.3 Proposed Mitigation

Options 2 and 3 were developed as mitigation measures for impacts to surface roadways, and do not require additional mitigation for impacts to surface roadways. Mitigation measures proposed in Chapter 16 of the Final EIS are adequate to reduce traffic impacts to the No Action levels for all three of the options considered, including Option 1.

Barge traffic for removal of excavated material, a potential mitigation for impacts to surface roadways within the City of Shoreline, would be coordinated with ChevronTexaco so that marine traffic accessing the dock is not interrupted. The construction barge would be scheduled to avoid conflicts or delays to general marine traffic and tribal fishing vessels. A detailed schedule would be developed as part of the permitting process.

In addition, the construction rail traffic would be scheduled to avoid conflicts or delays to the general rail traffic in the area. The construction rail traffic could be scheduled to arrive and/or depart the construction site at night, weekends, or other off-peak hours. A detailed schedule would be developed as part of the permitting process.

2.3 Summary of Changes from Final EIS

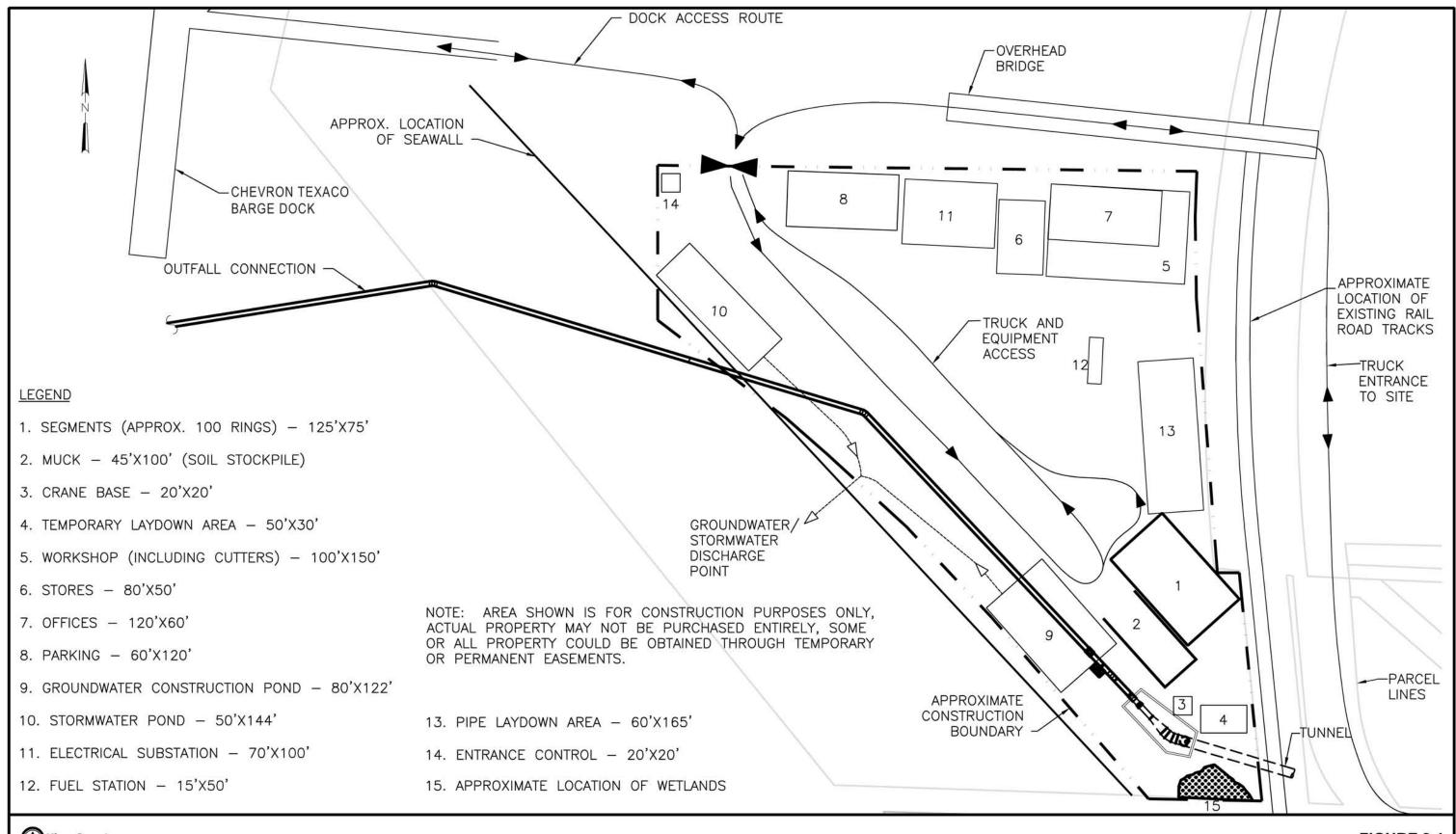
Table 2-4 summarizes impacts and mitigation measures presented in this Chapter in comparison to what was presented in the Final EIS.

Table 2–4. Summary of Impacts and Mitigation Changes from Final EIS for Portal 19 Transporting Options

Element of the Environment	Impact	Mitigation
Earth	Pile placement for Option 2 would result in temporary bottom disturbance during construction.	Same as Final EIS for outfall construction; additional mitigation as outlined in the Biological Assessment.
Water	Pile replacement for Option 2 would result in temporary turbidity increases during construction.	In addition to measures described in Final EIS, completely enclosing over-
	Potential for spills during conveyance of materials to barge.	water sections of conveyor, among other measures, would minimize potential for spills.
Plants and Animals	Pile installation for Option 2 would temporarily affect 0.006 acre of nearshore habitat; minor permanent losses of habitat would occur.	Same as Final EIS and described above for Water. Construction scheduling would avoid impacts to bald eagles
	Potential disturbance to bald eagles.	and fish.
Noise	Nighttime noise levels for all three options would exceed Snohomish County noise ordinances for residential areas if mitigation is not implemented.	A sound wall and/or other mitigation measures would reduce levels to comply with applicable Snohomish County ordinances, or reduce to levels that do not create a nuisance.
Land and Shoreline Use	Pile placement for Option 2 would require a shoreline substantial development permit.	Same as Final EIS.
Light and Glare	Lighting would be necessary during construction activities for all three options; however, lighting would be similar to existing conditions.	Same as Final EIS.
Transportation	With use of barge/railcar to remove construction spoils (Option 2 and 3) earthwork truck traffic would decrease by approximately 92 daily or 12 peak hour truck trips during the peak construction period. This reduction of vehicle trips would not change the intersection LOS and would only slightly decrease delays.	In addition to measures described in Final EIS, schedule use of rail (Option 3) or barge dock (Option 2) to minimize impacts to existing rail and marine traffic during construction.
	Transportation by rail would require a stockpile area and specialized rail-related equipment/expertise. There would be minimal impact to existing rail operations.	
	Transportation by barge would require a stockpile area, dock improvements, and specialized equipment. There would be minimal impact to existing marine traffic.	

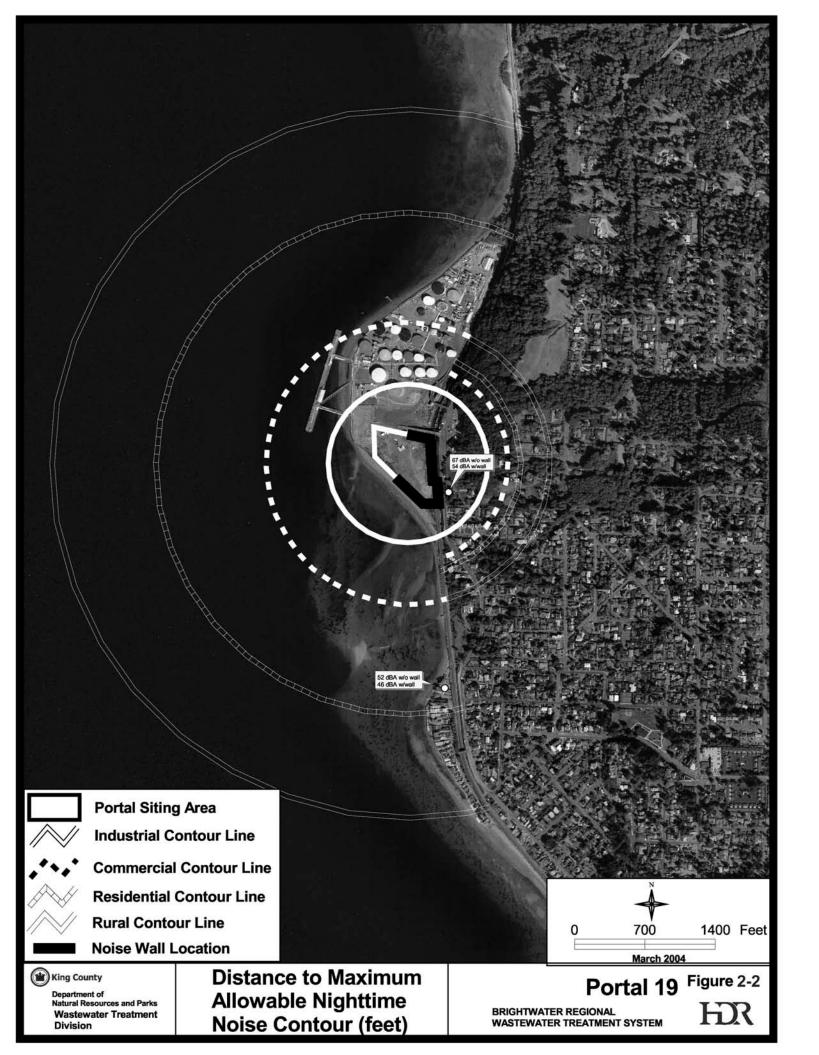
List of Figures

- Figure 2-1 Portal 19 Construction Layout
- Figure 2-2 Distance to Maximum Allowable Nighttime Noise Contour (feet) at Portal 19



King County
Department of
Natural Resources and Parks
Wastewater Treatment

FIGURE 2-1
PORTAL 19 CONSTRUCTION LAYOUT
BRIGHTWATER FINAL EIS ADDENDUM NO. 2



Chapter 3

New Construction Access Road At The Route 9 Site

Chapter 3 New Construction Access Road at the Route 9 Site

The Final EIS evaluated the potential for concurrent construction of the Brightwater Treatment Plant with proposed Washington State Department of Transportation (WSDOT) SR-9 improvements. As part of the predesign process, King County has developed a mitigation approach to alleviate impacts associated with concurrent construction of the Brightwater Treatment Plant and SR-9, which includes development of a new temporary construction access road at the Route 9 site. Evaluation of this option is described below. Key issues relate to:

- Modifications to earthwork quantities handled at the treatment plant site
- Revisions to proposed surface water mitigation features in the southernmost portion of the site
- Modifications to levels of service and wait times at intersections adjacent to the Route 9 treatment plant site and to StockPot employee traffic patterns if StockPot remains onsite

3.1 Project Description

As part of King County's commitment to mitigate traffic impacts from the Brightwater project, King County has been working with WSDOT to coordinate efforts relative to the concurrent construction of the Brightwater project and WSDOT's planned improvements to SR-9. WSDOT plans to construct the SR-9 improvement project during 2005 and 2006 and complete construction by January 2007. King County plans to begin construction of the Brightwater Treatment Plant project in 2005 and complete construction in 2009.

The Final EIS assumed construction access to the Route 9 site primarily at the intersection of SR-9 and 228th Street SE, with a secondary access from SR-9, south of 228th Street SE. King County is now proposing a temporary construction access road at the SR-9/SR-522 westbound ramp intersection, which would replace both of the previously proposed access locations. The access road at the SR-9/SR-522 westbound ramp intersection would accommodate all construction trips and would materially reduce construction trips and construction-related traffic along SR-9 north of SR-522. This new access road is south of 228th Street SE, consistent with the location description in the Final EIS.

The new construction access road to the Brightwater site would be located opposite the existing westbound SR-522 interchange ramp, as shown in Figure 3-1. Use of the roadway would be restricted to Brightwater construction traffic and potentially SR-9 construction traffic. WSDOT plans to signalize the SR-9/SR-522 westbound ramp intersection as part of the SR-9 improvement project, although it is likely that WSDOT would not signalize the intersection until late in the SR-9 project schedule. To further mitigate traffic impacts, King County proposes acceleration of the signal installation to early in the WSDOT project schedule.

A cross-section of the proposed construction access road on the east side of the westbound SR-522 ramp intersection is shown in Figure 3-2. The two-way roadway would be 30 feet wide and approximately 1,000 feet long along the southern boundary of the plant site. Roadway grade would be approximately 7 percent to match existing terrain. A retaining wall, approximately 15 feet high by 150 feet long, would be required along a portion of the roadway to retain and stabilize the anticipated cut excavations due to the roadway construction.

The treatment plant site predesign includes a landscaped mound of fill material to be located in the area east of the SR-522 ramps and north of Howell Creek to visually screen a portion of the treatment facilities. The mound would contain approximately 100,000 cubic yards (cy) of excavated material and have an area of approximately 250,000 square feet (sf) by 45 feet high. The construction access road would require a slight modification to the proposed location and size of the mounded area. The area to be traversed by the construction access road consists of natural steep slopes and is bordered by Burlington Northern-Santa Fe (BNSF) Railroad right-of-way on the southern edge of the property. Natural drainage runoff would be directed along the right-of-way from the north and east to the southwest through a combined swale and culvert system with discharge into Howell Creek.

An existing 36-inch-diameter culvert conveys flow in Howell Creek underneath the BNSF railroad embankment, daylights onto the Brightwater site, and then enters another piped section under an existing driveway. The proposed construction access road would be constructed over the existing driveway over the piped section of Howell Creek and would not require any additional culvert or modification to the existing culvert. As described in the Final EIS, the Brightwater project would construct a pipeline to divert other watercourses along the eastern and southern edges of the project site for discharge to Howell Creek. This pipe would be constructed early in the project schedule, prior to the temporary road construction. Stormwater generated from the roadway would be treated prior to discharge to Howell Creek, consistent with regulatory requirements.

The new construction access road would be built early in the Brightwater construction schedule and would be removed along with the retaining wall following completion of major construction on the plant site when construction traffic was substantially reduced from peak levels. The temporary access would be constructed in approximately 60 to 90 working days, including installation of traffic signal modifications at SR-9.

Access road construction would delay the completion of proposed mitigation in the southern tip of the project site adjacent to Howell Creek (referred to as the South Mitigation Area as shown on Figure 3-1) and the proposed reconstruction of Howell Creek until 2009 when the use of the access road is complete. The alignment of the proposed construction access road crosses the southernmost part of the proposed South Mitigation Area. That portion of the South Mitigation Area beyond the limits of the construction access road would be constructed concurrently with the construction access road; however, construction of the remaining mitigation area would not be completed until after the construction access road is removed. At the conclusion of the project, the construction access road embankment and remaining portions of the existing driveways and culverts would be removed and any remaining elements of the South Mitigation Area would be completed.

3.2 Areas of Potential Impact and Proposed Mitigation

3.2.1 Earth

Constructing the construction access road would require additional cut-and-fill volumes, which would contribute to the overall cut-and-fill balance for the site. The cut volume would be 2,260 cy and the fill volume would be 1,600 cy, resulting in an additional 660 cy of soil that would need to be removed or accommodated onsite in order to balance the cut-and-fill volumes. This modification of earthwork volume is less than a 0.3 percent increase over volumes discussed in the Final EIS and would not alter the impact evaluation included in the Final EIS.

3.2.1.1 Proposed Mitigation

Mitigation described in Chapter 4 of the Final EIS would adequately reduce the earth impacts discussed above to a level of non-significance. These measures, including erosion control measures and best management practices, construction scheduling, construction specifications to limit vibration and settlement, and other measures listed in Table 4-4 of the Final EIS would address construction-related impacts for the roadway, including construction of the proposed retaining wall. Because the temporary roadway would be removed following site construction, no operational mitigation measures are required.

3.2.2 Water

An existing 36-inch-diameter culvert conveys Howell Creek underneath the BNSF embankment and daylights onto the Brightwater site. Once on the site, Howell Creek is crossed by several driveways and is conveyed under these driveways by existing culverts. Short open sections of stream occur between the culverted reaches.

The proposed construction access road overlies one of the existing driveways where Howell Creek is currently piped. Building the construction access road would not require any new culvert or modification to existing culverts. The portion of Howell Creek below the construction access road would remain in a pipe for the duration of site construction. Following completion of major treatment plant construction, the construction access road would be removed and the remaining portion of Howell Creek below the railroad culvert would be enhanced as an open channel.

Therefore, the construction access road would delay the completion of the proposed South Mitigation Area for up to five years. During this time, the stream would continue to be conveyed in the existing culvert, rather than being daylighted early in the treatment plant site construction as described in the Final EIS. It is not anticipated that this delay would result in any additional long-term impacts to Howell Creek beyond those described in Chapter 6 of the Final EIS.

Construction of the construction access road and the retaining wall would not alter short-term or construction-related stormwater impacts described in the Final EIS. Much of the area is currently paved or impervious and impervious areas would be essentially the same as under current conditions. All construction runoff would be managed according to conditions in the National Pollutant Discharge Elimination System (NPDES) Individual Stormwater Permit obtained from the Washington State Department of Ecology prior to construction at the site.

Construction of the temporary retaining wall will include an underdrain system to avoid disruption of groundwater flows in the immediate vicinity of the retaining wall. The underdrain system would be removed when the retaining wall is removed following site construction

3.2.2.1 Proposed Mitigation

The addition of the proposed access road would delay the completion of some elements of the South Mitigation Area. It would not alter the scope or extent of the proposed mitigation once the project is completed. Mitigation described in Chapter 6 of the Final EIS would adequately reduce impacts from the construction access road to surface water resources to a level of non-significance. King County would coordinate closely with applicable permitting agencies to ensure that the temporarily delayed restoration of the portion of Howell Creek on the project site fully incorporates best management practices and, therefore, does not result in direct or indirect impacts to Howell or Little Bear Creeks.

3.2.3 Plants and Animals

The area proposed for the construction access road is currently developed; however, a portion of the roadway would cross through a forested area in the southernmost tip of the project site adjacent to the property line between the site and the BNSF railroad. The construction road design includes a retaining wall to avoid the removal of existing significant trees on the site. The road alignment would also be designed to avoid existing conifer trees within developed areas in this portion of the site. Impacts to vegetation in this area would be primarily in grassy areas with limited habitat value. This would result in a slight increase in impervious area; however, this is not expected to represent a substantial change from existing conditions during the construction period and the disturbed area would be revegetated as part of habitat mitigation when the construction access road is no longer needed.

As mentioned above, the construction and use of the access road over the course of treatment plant construction would delay completion of the South Mitigation Area. This would not affect the functioning or value of the mitigation area upon completion of treatment plant construction. There would be no direct impact to fisheries, because there are no fish in Howell Creek at this time due to an existing barrier downstream of the site at SR-9. All construction would be conducted in accordance with Hydraulic Project Approval (HPA) requirements to minimize any potential for indirect impacts to fish in Little Bear Creek or downstream portions of Howell Creek.

Therefore, the construction access road does not alter the impact evaluation for plants and animals described in the Final EIS.

3.2.3.1 Proposed Mitigation

Mitigation described in the Final EIS would reduce impacts associated with the construction access road to a level of non-significance. The roadway would temporarily infringe upon the South Mitigation Area; however, the proposed mitigation would be finished in its entirety upon completion of treatment plant construction. The overall function of the wetland mitigation area would be unaffected by the construction access road over the long term. King County would coordinate closely with applicable permitting agencies to ensure that the South Mitigation Area is constructed and maintained in accordance with all permit requirements. Any in-water work would be conducted in compliance with HPA permit conditions, including construction windows.

3.2.4 Transportation

The Final EIS assumed construction access to the Route 9 site primarily at the intersection of SR-9 and 228th Street SE, with a secondary access from SR-9, south of 228th Street SE. Proposed access modifications to the Route 9 site would eliminate construction access at 228th Street SE. The proposed construction access road would

accommodate all construction trips at the intersection of the SR-9 and SR-522 westbound ramps.

With construction access to the Route 9 site removed from the 228th Street SE intersection, two of the existing onsite facilities could potentially remain operational: StockPot and OPUS. Trips associated with these facilities were assumed to remain on the transportation system in the following traffic impact analyses. Impacts related to these facilities are further discussed in Chapter 4 of this Addendum.

Table 3-1 shows the study area's p.m. peak hour roadway levels of service (LOS) developed as part of the Brightwater Final EIS Addendum 1, which clarified background traffic levels in the vicinity of the Route 9 site. Afternoon or p.m. peak hour trips represent worst case conditions in the vicinity of the Route 9 site. Trip distribution was revised further based on construction and operation of a construction access road at the south end of the site. The redistributed construction-related traffic following implementation of the construction access road does not impact roadway LOS. The revised trip distribution results in operations similar to those described in the Final EIS for both the No Action and peak construction conditions.

Table 3–1. Route 9 Site–Estimated 2007 PM Peak-Hour Traffic Conditions for Roadway Segments

Segment	No Action LOS ^b	Final EIS Construction LOS ^b	Revised Access LOS
228th Street SE, west of SR-9	С	С	С
228th Street SE, east of Bothell-Everett Hwy (SR-527)	В	В	В
SR-9, north of SR-522 ^a	F	F	F

^a Does not include WSDOT SR-9 widening project.

Intersection operations during the construction period were also evaluated (Table 3-2). With the construction access removed from the SR-9/228th Street SE intersection, operations would revert back to No Action levels (LOS D), in comparison to what was shown in the Final EIS as LOS F operations. The intersection operations at the SR-9/SR-522 interchange would experience slightly higher delays than the No Action conditions, increasing by an average of 7 to 12 seconds per vehicle, but would be similar to the operations during construction described in the Final EIS. The temporary access at the SR-522 westbound ramp intersection, however, would require traffic signal control to maintain the LOS shown in Table 3-2. The slightly higher delays of 2 to 4 seconds per vehicle experienced with the construction access roadway at the SR-9 at SR-522 eastbound ramps and the SR-9 at SR-524 intersection are attributed to OPUS and StockPot traffic, and are further discussed in Chapter 4 of this Addendum.

^b Revised by Addendum 1, Comparison of Final EIS and Updated Background Growth Rates in Chapter 16, Transportation, January 2004.

Table 3–2. Route 9 Site–Estimated Intersection PM Peak-Hour Traffic During Construction

Intersection	No A	No Action ^e		FEIS Construction ^e		Revised Access Construction	
	LOS	Delay ^a	LOS	Delay	LOS	Delay ^a	
SR-9 at 228th Street SE ^b	D	52	F	99	D	50	
SR-9 at SR-522 Eastbound Ramps ^b	Е	74	F	84	F	86	
SR-9 at SR-522 Westbound Ramps ^b	Dc	30	Dc	36	D_q	37	
SR-9 at SR-524 (Maltby Road) b	F	125	F	117	F	121	

^a Average delay, measured in seconds per vehicle, includes deceleration time, stopped time, and acceleration time due to intersection controls.

Potential projects in the vicinity of the Route 9 site that could affect traffic operations include the SR-9 improvement project and construction of a Costco store. The cumulative effects of these projects on traffic are shown in Table 3-3. The treatment plant construction access defined in the Final EIS is compared to the revised access location. With the construction access removed from the SR-9/228th Street SE intersection, operations would revert back to No Action levels. The operations at the SR-9/SR-522 eastbound ramps intersection and the SR-9/SR-524 intersection would be largely unchanged from those estimated in the Final EIS and thus would require mitigation as described in Chapter 16 of the Final EIS. The SR-9/SR-522 westbound ramps intersection would operate at acceptable levels with the construction access road, due to the new traffic signal control.

Table 3–3. Route 9 Site–Estimated Cumulative Intersection PM Peak-Hour Traffic During Construction

Intersection	SR-9 R Const	ion with loadway ruction nly ^d	dway SR-9 Construction, Brightwater Construction Costo		Revised Access SR-9 Construction, Brightwater Construction, Costco Operations	
	LOS	Delay ^a	LOS	Delay ^a	LOS	Delay ^a
SR-9 at 228th Street SE	E	74	F	146	Е	75
SR-9 at SR-522 Eastbound Ramps	E	74	F	85	F	88
SR-9 at SR-522 Westbound Ramps	Dp	30	F ^b	80	D ^c	48
SR-9 at SR-524 (Maltby Road)	F	174	F	169	F	172

^a Average delay, measured in seconds per vehicle, includes deceleration time, stopped time, and acceleration time due to intersection controls.

Does not include WSDOT SR-9 widening project.

^c Unsignalized intersection.

^d Temporary signal at construction access.

^e Revised by Addendum 1, Comparison of Final EIS and Updated Background Growth Rates in Chapter 16, Transportation, January 2004.

^b Unsignalized intersection.

^c Temporary signal at construction access.

^d Revised by Addendum 1, Comparison of Final EIS and Updated Background Growth Rates in Chapter 16, Transportation, January 2004.

3.2.4.1 Proposed Mitigation

To maintain an acceptable LOS at the SR-9/SR-522 westbound ramp intersection, King County would provide temporary traffic signal control at this intersection during construction. All other mitigation would be as described in Chapter 16 of the Final EIS.

3.3 Summary of Changes from Final EIS

Table 3-4 summarizes impacts and mitigation measures presented in this Chapter in comparison to what was presented in the Final EIS.

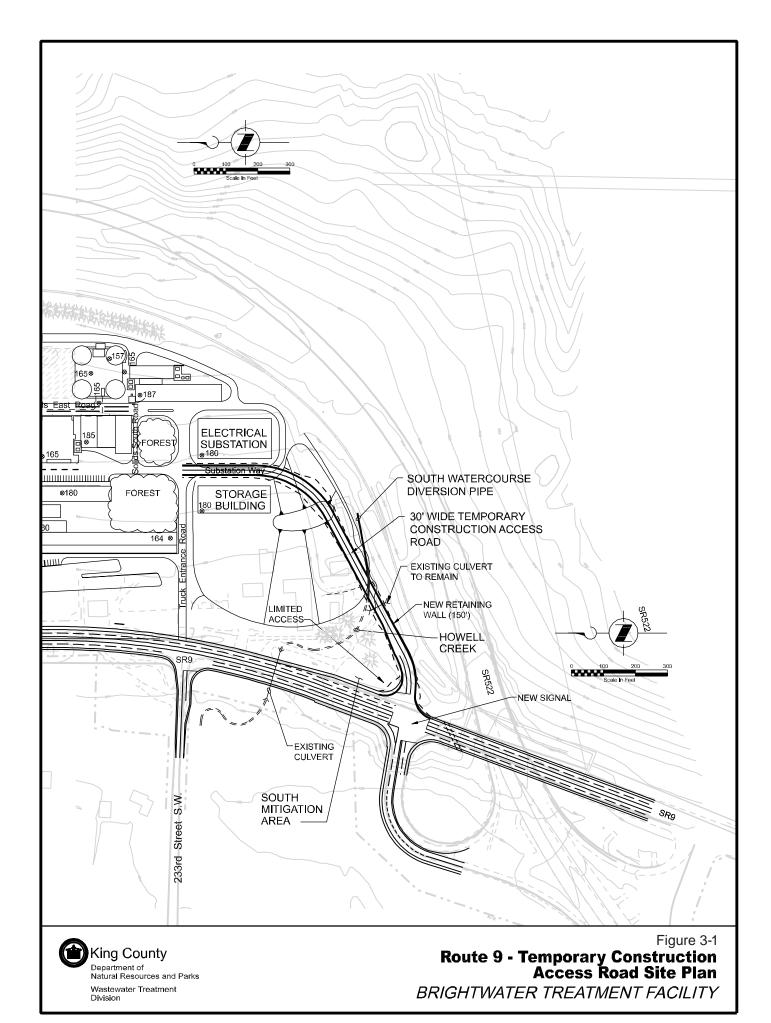
Table 3–4. Summary of Impacts and Mitigation Changes from Final EIS for a New Construction Access Road

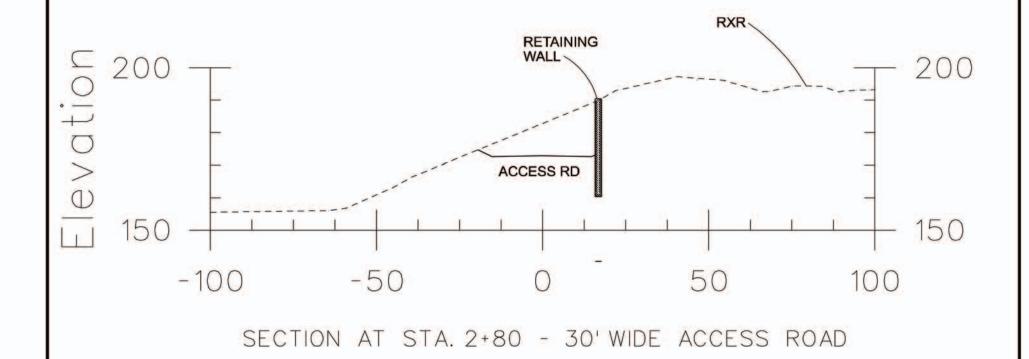
Element of the Environment	Impact	Mitigation
Earth	Additional 660 cy of earth removed or accommodated onsite.	Same as Final EIS.
Water	Portion of Howell Creek under construction access road would continue to be culverted for the duration of treatment plant construction.	Portion of South Mitigation Area construction would be delayed during treatment plant construction. Entire South Mitigation Area would be completed upon treatment plant construction.
Plants and Animals	No direct impact to fish because no fish are present in Howell Creek east of Route 9.	Same as Final EIS; compliance with HPA permit conditions for in-water work.
Traffic	Construction access at SR-9/228th Street (Final EIS) relocated to SR-9/SR-522 westbound ramps intersection. Construction access road would maintain No Action LOS at SR-9/228th SE intersection, SR-9/SR-522 intersection; other impacts unchanged from Final EIS.	Temporary signalization at SR- 9/SR-522 westbound ramps intersection would maintain LOS. All other mitigation measures as described in Final EIS.

List of Figures

Figure 3-1 Route 9 – Access Road Site Plan

Figure 3-2 Route 9 – Access Road Section





King County
Department of
Natural Resources and Parks
Wastewater Treatment
Division

Figure 3-2

Route 9 - Access Road Section

BRIGHTWATER PRELIMINARY DESIGN

Chapter 4

Demolition and Construction at Route 9 Site

Chapter 4 Demolition and Construction at the Route 9 Site

The Brightwater Final EIS (Chapters 4, 5, 6, 9, 10, and 11) analyzed the impacts that would result from demolition of structures and construction of the Brightwater Treatment Plant on the Route 9 site. The Final EIS also included an analysis of cumulative impacts related to concurrent construction with the proposed SR-9 widening and Costco Warehouse Development projects near the Route 9 site. This chapter expands that analysis based on new information developed as part of the predesign process. This includes additional studies being conducted to establish appropriate design and construction criteria for the treatment plant at the Route 9 site. However, the overall analysis of impacts and the conclusions has not changed significantly beyond that provided in the Final EIS.

Additional detail concerning the impacts associated with demolition and construction activities at the Route 9 site is provided. Decisions have not been made on when the StockPot Culinary Campus (StockPot) would relocate, or whether King County would demolish the building or retain and renovate it for maintenance and storage on the treatment plant site. The following analysis is based on the assumption that StockPot would continue operating during demolition of other structures on the site and construction of the treatment plant. Key issues relate to:

- Potential air quality, noise and vibration, environmental health (soil contamination), and transportation impacts to StockPot operations during the demolition and construction phases of the Brightwater project
- Potential displacement impacts associated with relocation of StockPot

4.1 Project Description

As indicated in the Final EIS (Chapters 4 and 11), prior to constructing the Brightwater Treatment Plant, it would be necessary to remove most of the existing structures from the Route 9 site. Based on currently available information, 33 existing structures, totaling approximately 83,000 square feet (excluding the OPUS Northwest Industrial building and the StockPot), would be demolished to allow construction of the Brightwater Treatment Plant. These structures include storage buildings, warehouses, sheds, offices, and residences with garages and outbuildings. The existing structures would be demolished as needed over an approximately two-year period to accommodate construction.

Two large structures, the OPUS Northwest industrial building and the StockPot Culinary Campus, would remain on the site through most of the construction period, which is anticipated to last from 2005 through late 2009. The OPUS building would be used by King County during construction and then would be demolished following completion of construction. The Final EIS anticipated that the OPUS building would be demolished during construction of the treatment plant. At this time, it is expected that the OPUS building would be demolished sometime after 2007. The StockPot facility would remain operational during demolition and construction of the treatment plant; the building then may be demolished or it may be retained and renovated for use as a maintenance and storage facility.

4.2 Areas of Potential Impact and Proposed Mitigation

4.2.1 Earth

The Final EIS indicated that site clearing, grubbing, dewatering, earthmoving, and construction of earth retention structures at the treatment plant site have the potential to distribute contaminated soil to previously uncontaminated areas if contamination exists and is not properly remediated. A Phase 1 Environmental Site Assessment was completed for the 17 properties (excluding the StockPot Culinary Campus) that compose the Route 9 site. This assessment was done as part of the Final EIS analysis (Appendix 4-D). Results of this assessment indicate that past and current property uses warrant site investigations to determine the presence, location and characteristics of any contaminants during the design phase of the project. Of the sites evaluated, one property is on the Washington State Department of Ecology's Suspected and Confirmed Contaminated Site List.

As discussed in the Final EIS (Chapter 4), limited information on subsurface soil contamination was obtained from the 10 soil borings that were drilled on the site. Field screening with a photo-ionization detector was performed on all borings to detect volatile organics. The results of this screening did not detect contaminants in any of the cuttings or samples.

As of March 2, 2004, Phase 2 Site Assessments were completed for most of the properties that comprise the Route 9 site. The original estimates for site contamination discussed in the Final EIS and supporting documentation (Final EIS Appendix 4-D, *Phase I Environmental Site Assessment Route 9 Parcels*, August 2003) were conservative and are applicable for this analysis (further evaluations are required to determine the presence and extent of contamination at the Route 9 site). Additional site-specific investigations are ongoing and will continue.

4.2.1.1 Proposed Mitigation

The majority of site remediation would be completed prior to the site acquisition process. Any remediation that has not been completed as part of the acquisition process would be completed by King County during the initial construction phases, including demolition and grading. All appropriate regulatory requirements and permitting conditions would be met.

4.2.2 Air

The Final EIS analysis (Chapter 5) indicated that demolition and construction-related activities at the treatment plant site would cause short-term local increases in levels of particulate matter as a result of fugitive dust emissions, temporary odors from painting buildings or laying asphalt, and emissions from construction vehicles and vehicles idling in traffic due to construction-related traffic delays. In addition, identified contaminants in the soil could become airborne during site remediation.

The StockPot Culinary Campus would continue its operations throughout the demolition and construction phase of the project and would be subject to short-term air quality impacts as described in the Final EIS (Chapter 5). As previously stated, demolition activities would be staged over a two-year period, thereby limiting surface disruptions and overall concentrations of emissions at any given time.

The conclusions of the Final EIS analysis and proposed mitigation do not change significantly as related to the StockPot facility. The potential for air quality impacts to StockPot would be short term (i.e., during construction phase, 2005-2009), only while demolition or construction work is in progress. No significant long-term adverse impacts on local or regional air quality are anticipated as a result of the Route 9 site demolition work.

The following sections provide additional information and analysis related to potential fugitive dust and criteria pollutant emissions, concurrent construction with the SR-9 widening project, and odor impacts associated with demolition activities at the Route 9 site and the potential impacts to the StockPot Culinary Campus. This analysis supports the conclusions provided in Chapter 5 of the Final EIS.

4.2.2.1 Fugitive Dust Emissions

Fugitive dust emissions are greatest during dry periods, periods of intense construction activity, and periods of high-wind conditions. Dust emissions from construction activities should be insignificant from autumn through spring, when the soil at the site is wet and the potential for dust emissions is decreased. In order for the StockPot Culinary Campus to be impacted by fugitive dust from construction, the soil would have to be dry and made airborne by construction activities and the wind direction would have to be from

the construction area toward the StockPot building with sufficiently high wind speed to carry the particulates across the property line.

Most of the construction activities for the treatment plant would occur to the south of StockPot. Analysis of the meteorological data collected from July 2002 through March 2003 at the Route 9 site showed that, for the 9-month period, the winds predominantly blow from the north 50 percent of the time and from the south 23 percent of the time. This pattern is consistent during both winter and summer months. Therefore, to impact StockPot, the wind direction would have to be from the construction areas toward StockPot, which would occur about 23 percent of the time.

Proposed Mitigation

Although construction impacts would be temporary (i.e., during construction phase, 2005-2009), they would be mitigated to meet the requirements of the Puget Sound Clean Air Agency (PS Clean Air) for minimizing air quality impacts to ambient air. In addition to the treatment plant construction mitigation identified in Chapter 5 of the Final EIS, measures to further reduce fugitive dust impacts to the StockPot Culinary Campus operations include:

- Installing an enhanced filtration system on the intake air duct at the StockPot Culinary Campus
- Using the proposed construction access road at the south end of the site to reduce the potential for dirt and mud deposited by construction vehicles to be tracked onto the StockPot site
- Reducing vehicle speeds in unpaved construction areas

4.2.2.2 Criteria Pollutant Emissions

The history of land uses at the Route 9 site (auto wrecking yards) indicates that there may be soil contamination from vehicles and other sources. The contaminants would include total petroleum hydrocarbons (TPH), which includes benzene, ethylbenzene, toluene, and xylenes (BETX), and polycyclic aromatic hydrocarbons (PAHs). These contaminants would be classified as toxic air pollutants (TAPs) or hazardous air pollutants (HAPs) under applicable regulations. They could volatilize, or disperse into the air, if the soil containing these contaminants were disturbed during construction.

King County is currently conducting preliminary investigations to define the nature and extent of the hydrocarbon contamination. The initial investigation has indicated that the petroleum hydrocarbon contamination that is present is below required cleanup levels. The investigation also indicated that there could be a low level of dispersed cadmium contamination present at the south end of the site.

If the contaminants are present in the soil in sufficient quantities that airborne contaminant levels could be of concern to worker safety, the Washington State and Federal Occupational Safety and Health Act (OSHA) regulations may require onsite monitoring during cleanup of the contaminated soils to ensure that worker health and safety standards are met. This would include monitoring contaminants that could be emitted to the air from contaminated soil or groundwater. Failure to comply with these standards could result in curtailing or stopping the activity that was producing violations.

Such monitoring would be conducted at the area of contamination where workers are present. However, emissions from the area would be diluted as they dispersed away from the area of contamination. Because of the diluting effect, the exposure to the contaminants outside the immediate area of contamination would be less than what was measured at the monitoring station.

Proposed Mitigation

As previously stated, an enhanced air filtration system could be installed on the intake air duct at StockPot as a mitigation measure. The enhanced air filtration system would include a particulate matter filter, followed by a carbon filter. These filters are proven effective at removing fugitive dust and volatile organic compounds in other industrial applications. If contaminants in the form of fugitive dust or odors should manage to leave the site boundary and migrate to the StockPot building, the air filters, when properly installed and maintained, would remove the contaminants from the intake air and not allow emissions to affect the food making processes.

4.2.2.3 Concurrent Construction with SR-9 Widening

Cumulative impacts could occur during the construction of the treatment plant if the SR-9 widening project were to occur at the same time. Concurrent construction could potentially delay traffic on SR-9 and increase ambient levels of carbon monoxide in the vicinity of the treatment plant. This impact would be temporary and is not expected to be significant.

Proposed Mitigation

Mitigation measures identified in the Final EIS would be adequate to reduce impacts to a level of nonsignificance.

4.2.2.4 Odor Impacts

Construction odors (such as odors from painting a building or laying asphalt) might temporarily be noticeable to people in the project area, including occupants of the

StockPot building. Any such odors to people likely would be intermittent and would be dispersed at increasing distances from the source.

For odor impacts from these types of construction activities to occur at the StockPot building, all of the following events must occur at the same time: the odorous activity must be in process, the wind must be blowing toward the StockPot building, and the activity must be close enough to the property line and of sufficient size that the odors would not be dispersed to undetectable levels by the time they reached the property line. Should all of these events occur at the same time and should the odors reach the StockPot building, the carbon filter would remove the odors from the intake air.

Proposed Mitigation

Installation of a carbon filter on the intake air duct at the StockPot building would remove potential odors from the intake air, thereby reducing potential odor impacts to a level of nonsignificance.

4.2.3 Water

As part of predesign efforts, additional groundwater studies have been conducted at the Route 9 site, as described below.

Two groundwater pump tests are being conducted at the Route 9 site to gather aquifer data for design and construction of below-grade structures. The pump tests will provide data that describe the dewatering characteristics of the near-surface unconfined aquifer at the site including aquifer yield, groundwater level drawdown (vertically and horizontally), and aquifer hydraulic coefficients that aid in the design of dewatering systems.

Three observation/monitoring wells have recently been drilled: two at the pump test site just south of StockPot and one at the pump test site in the northeast corner of the Fitz/Greenleaf property. Visual inspection of the soil samples collected during drilling and qualitative observation of the volume of water generated during well drilling indicate that the saturated zones at both sites have significantly lower permeability than the 10⁻² cm/sec value used in the Final EIS to evaluate the potential impact due to construction and operation dewatering. The estimated permeability is 10⁻⁴ cm/sec at the site just south of Stockpot and 10⁻³ cm/sec at the Fitz/Greenleaf site based on the total thickness of silty sand at both sites. The lower permeabilities would yield significantly less total water pumped during dewatering and operations, and the potential zone of pumping influence would be significantly smaller than predicted in the Final EIS.

4.2.3.1 Potential Mitigation

In addition to mitigation measures identified in the Final EIS, the results of the pump tests will be used to help refine the design and construction of below-grade structures and mitigation measures associated with dewatering activities at the Route 9 site.

4.2.4 Noise and Vibration

4.2.4.1 Noise

As discussed in the Final EIS, truck traffic and site work during construction at the Route 9 site would result in temporary noise impacts to receptors near the site and along construction haul routes including occupants of the StockPot and OPUS buildings. The kinds of noise that might be expected during construction include the sounds of earthmoving equipment, pile-driving equipment, concrete trucks, dump trucks, cranes, and other types of heavy construction equipment.

Under WAC 173-60-050, treatment plant construction noise is exempt from the Washington State Department of Ecology's maximum permissible sound levels. Exemptions where "sounds created by the installation or repair of essential utility service" are exempt during daytime hours from the maximum noise levels specified, but some local jurisdictions have more strict construction exempt time requirements (See Final EIS, Appendix 10-A, Tables 1 and 3).

Under the Snohomish County noise code, sounds created by construction equipment, including special construction vehicles, at temporary construction sites are exempt from maximum permissible noise levels if the receiving property is located in a commercial or industrial district. The exemption extends to residential receiving properties during daytime hours (7 a.m. to 10 p.m.). However, if conditions applied to a project through the State Environmental Policy Act (SEPA) or conditional use permit process are more restrictive than the noise code, the more restrictive standards would apply.

Table 10-7 in the Final EIS shows the expected construction equipment and maximum noise levels at a distance of 50 feet. As indicated in the Final EIS (Chapter 10), construction noise levels at the nearest residences, approximately 100 feet west of the site, are likely to be a maximum of 83 to 85 dBA. These noise levels are based on construction truck traffic using SR 9, which is located about 50 feet from the residential receiving properties. StockPot is located about 100 feet north of the site and further from the construction area and the construction access road than the residences to the west. At distances beyond 50 feet, maximum noise levels would be reduced by 5 to 7 dBA for each doubling of distance between the noise source and the receiver. Therefore, truck traffic and site work during construction would likely cause similar or lower noise levels at StockPot than at the nearest residences. As indicated in the Final EIS, noise level reduction with distance could be greater, depending on the effects of terrain and line-of-

sight barriers such as berms, retaining walls and buildings. In addition, both WAC 173-60-040 and Snohomish County Code, Chapter 10.01, Acceptable Noise Levels, allow 10 dBA higher maximum noise level at Stockpot, which is an industrial receiving property, than at a residential receiving property.

Proposed Mitigation

Mitigation measures identified in the Final EIS (Chapter 10) would be adequate to reduce noise impacts to a level of nonsignificance at receptors adjacent to the project site, including StockPot. King County would work with StockPot to develop appropriate mitigation for interior noise levels if StockPot remains operational during construction.

4.2.4.2 Vibration

Currently, there are no regulations governing the vibration that new or existing sources are allowed to generate at the Route 9 site. Potential vibration impacts to the StockPot Culinary Campus that could result from demolition and construction activities at the Route 9 site would be the same as those discussed in the Final EIS (See Table 10-8 and Figure 10-2 in the Final EIS).

Proposed Mitigation

Mitigation measures identified in the Final EIS would be adequate to reduce vibration impacts to a level of nonsignificance.

4.2.5 Land Use

As discussed in Chapter 11 of the Final EIS, conversion of the Route 9 site to a public facility use would result in the displacement of multiple businesses (including StockPot Culinary Campus) and several residential occupants that are located on the site.

King County is following both Washington State and federal regulations relating to property acquisition and relocation for the Brightwater project. Relocation assistance is being provided to eligible site occupants who would be displaced at the Route 9 site. Relocation planning efforts to date indicated that there is adequate supply of land zoned to allow a facility such as StockPot within Snohomish County, King County, and the Puget Sound region. Though all business relocations are challenging, the StockPot Culinary Campus relocation does not appear to be unique or infeasible.

4.2.5.1 Proposed Mitigation

Mitigation identified in the Final EIS would be adequate to reduce land use impacts to a level of nonsignificance.

4.2.6 Transportation

The Final EIS assumed all businesses that currently occupy the Route 9 site would be displaced by the proposed Brightwater Treatment Plant. However, modifications to temporary construction project access could potentially allow businesses in two of the existing buildings to continue operating through the construction phase of the project. Further discussion of construction access modifications is contained in Chapter 3 of this Addendum. Assumptions for the following analyses include:

- The StockPot Culinary Campus would remain operational during construction
- The OPUS building would be acquired and used by King County during construction

Both buildings access the transportation system at the SR-9/228th Street SE intersection. During construction, this access would be maintained and used solely by the business related vehicles. All construction vehicle access is assumed to occur at the SR-9/SR-522 westbound ramps intersection.

The StockPot and OPUS businesses currently generate approximately 80 vehicle trips during the peak hour of traffic (based on CH2M HILL counts from February 11 and 18, 2003). Trip generation and distribution would be similar to the existing use during construction of the treatment plant.

Table 4-1 summarizes the intersection operations for No Action conditions, Final EIS conditions, and the revised access conditions, which include the StockPot and OPUS vehicle trips. With the construction access removed from the SR-9/228th Street SE intersection, operations would revert back to No Action levels (LOS D), in comparison to the Final EIS LOS F operations. The operations at the SR-9/SR-522 interchange would experience slightly higher delays than the No Action conditions, increasing by an average of 7 to 12 seconds per vehicle, but would be similar to the operations during construction described in the Final EIS. The temporary access at the SR-522 westbound ramp intersection, however, would require traffic signal control to maintain the LOS shown in Table 4-1. The SR-9 at SR-524 intersection would operate similarly, at LOS F levels, in all scenarios analyzed.

Table 4–1. Route 9 Site - Estimated Intersection PM Peak-Hour Traffic During Construction

	No Action ^e		FEIS Construction ^e		Revised Access Construction	
Intersection	LOS	Delay ^a	LOS	Delay ^a	LOS	Delay ^a
SR-9 at 228th Street SE ^b	D	52	F	99	D	50
SR-9 at SR-522 Eastbound Ramps ^b	Е	74	F	84	F	86
SR-9 at SR-522 Westbound Ramps ^b	Dc	30	Dc	36	D^d	37
SR-9 at SR-524 (Maltby Road) b	F	125	F	117	F	121

^a Average delay, measured in seconds per vehicle, includes deceleration time, stopped time, and acceleration time due to intersection controls.

Potential projects in the vicinity of the Route 9 site that could affect traffic operations include the SR-9 improvement project and construction of a Costco store. The cumulative effects of these projects on traffic are shown in Table 4-2, including the treatment plant construction access defined in the Final EIS. With the construction access removed from the SR-9/228th Street SE intersection, operations would revert back to No Action levels. The operations at the SR-9/SR-522 eastbound ramps intersection and the SR-9/SR-524 intersection would be largely unchanged from those estimated in the Final EIS. The SR-9/SR-522 westbound ramps intersection would operate at acceptable levels with the construction access road, due to the new traffic signal control.

Table 4–2. Route 9 Site - Estimated Cumulative Intersection PM Peak-Hour Traffic During Construction

	No Action with SR-9 Roadway Construction Only ^d		FEIS SR-9 Construction, Brightwater Construction, Costco Operations ^d		Revised Access SR-9 Construction, Brightwater Construction, Costco Operations	
Intersection	LOS	Delay ^a	LOS	Delay ^a	LOS	Delay ^a
SR-9 at 228th Street SE	E	74	F	146	Е	75
SR-9 at SR-522 Eastbound Ramps	E	74	F	85	F	88
SR-9 at SR-522 Westbound Ramps	D_p	30	F ^b	80	Dc	48
SR-9 at SR-524 (Maltby Road)	F	174	F	169	F	172

^a Average delay, measured in seconds per vehicle, includes deceleration time, stopped time, and acceleration time due to intersection controls.

Does not include WSDOT SR-9 widening project.

^c Unsignalized intersection.

^d Temporary signal at construction access.

^e Supplemented by Addendum 1, Comparison of FEIS and Updated Background Growth Rates in Chapter 16, Transportation, January 2004.

b Unsignalized intersection.

^c Temporary signal at construction access.

^d Supplemented by Addendum 1, Comparison of FEIS and Updated Background Growth Rates in Chapter 16, Transportation, January 2004.

4.2.6.1 Proposed Mitigation

In addition to mitigation identified in the Final EIS and the temporary construction access road discussed in Chapter 3 of this Addendum, a temporary traffic signal installed at the construction access at the SR-9/SR-522 westbound ramps intersection would maintain the No Action LOS. Proposed changes and mitigation would be adequate to reduce impacts to a level of nonsignificance.

4.3 Summary of Changes from the Final EIS

Table 4-3 summarizes impacts and mitigation measures presented in this Chapter in comparison to what was presented in the Final EIS.

Table 4–3. Summary of Impacts and Mitigation Changes from Final EIS for Demolition and Construction at the Route 9 Site

Element of the Environment	Impact	Mitigation
Earth	Original estimates for site contamination discussed in the Final EIS were conservative and are applicable for this analysis.	Same as Final EIS.
Air	Same as Final EIS.	Overall mitigation same as Final EIS; installing an enhanced carbon air filtration system on the air intake duct, including a carbon filter, at the StockPot building would remove fugitive dust, pollutant emissions, volatile organic compounds and odors from the intake air.
Noise and Vibration	Noise levels at StockPot would be within the acceptable noise levels allowed within an industrial zone. Vibration impacts same as Final EIS	Same as Final EIS.
Land Use	Same as Final EIS.	Same as Final EIS.
Transportation	Construction access at SR-9/228th relocated to SR-9/SR-522 westbound ramps intersection. 228th Street SE access not affected by construction traffic and StockPot and OPUS buildings remain operational.	Temporary traffic signal installed at construction access (SR-9/SR-522 westbound ramps intersection).